CASEREVIEW

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IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:
L2/S1 Lumbar Discogram

A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION:
This physician is a Board Certified Orthopedic Surgeon with over 13 years of experience.

REVIEW OUTCOME:

Upon independent review, the reviewer finds that the previous adverse determination/adverse determinations should be:

☒ Upheld (Agree)

Provide a description of the review outcome that clearly states whether medical necessity exists for each of the health care services in dispute.

PATIENT CLINICAL HISTORY [SUMMARY]:
The claimant is a male who was injured XX/XX/XX. He and his co-worker were xxxxxand he developed pain in his lower back. He was originally treated with medication including Flexeril, Etodolac, Gabapentin and Norco. He also underwent a course of PT. On xxxx he underwent his first Lumbar ESI and reported 60% improved of the radicular-type pain into the right lower extremity. He underwent his second ESI on xxxxxand received significant pain relief immediately, with continued 60% relief of symptoms.

On xxxxx, MRI of the Lumbar Spine, Impression: 1. Degenerative changes in the lumbar spine as described above. 2. Multilevel disc bulging causes no significant overall canal stenosis. There is a posterior annular fissure at L4-L5. 3. There is mild neural foraminal narrowing at L3-4 and L5-S1. There is mild to moderate right and mild left neural foraminal narrowing at L4-5. 4. There is multilevel facet degeneration, more prominent in the lower lumbar spine. 6. There is multilevel desiccation without disc height loss. 6. There is mild loss of vertebral body height at T12 anteriorly, old.

On xxxx, Procedure Report. Procedure: ESI #1 without sedation.

On xxxxx, Procedure Report. Procedure: ESI #2 without sedation.

On xxxxx, the claimant presented with increased pain in the lower back and right hip since he was last seen on. He rated his pain a 7/10 with some tingling in the left foot which was new. On physical examination, strength was 5/5 for hip flexion, knee extension, knee flexion, dorsiflexion, plantar flexion and extensor hallucis longus muscles. There was normal muscle tone in both lower extremities. No atrophy. Deep

tendon reflexes were 2+ for patellar and Achilles tendons bilaterally. Negative straight-leg raise bilaterally. Pinprick sensation was decreased in the right lateral calf compared with the left but otherwise was intact and symmetrical in the lower extremities. Electrodiagnostic Impression: 1. EMG nerve conduction studies are consistent with chronic L5 radiculopathy on the right. 2. I find no electrodiagnostic evidence of left lumbosacral radiculopathy, L3-S1.

On xxxxx, the claimant presented with low back pain and right lower extremity pain. He denied weakness, however stated that after walking long distances his leg pain intensifies and he has to stop and rest for it to go away. He also complains of a new onset sensation of left hip "buzzing" which he described as it felt like a "phone on vibrate in my back pocket". On examination he demonstrated a normal gait pattern. There was significant spinal tenderness in the paraspinal muscles as well as over the right SI joint. There was abnormal sensation to light touch seen in both lower extremities-on the left his lateral hip he felt a buzzing sensation. He felt a squeezing sensation right medial knee he had burning numbness, tingling. There was normal motor strength to upper and lower extremities. Reflexes in upper and lower extremities were normal. Bilateral straight leg raise was negative. Assessment: Spinal stenosis L4-5 bilateral associated with bilateral lumbar radicular syndrome, worse on right. Plan: Diagnostic selective nerve root block of the right L4 nerve root.

On xxxxx, the claimant presented for follow up after a visit on xxxxx, at which time he was having a significant increase in pain. At that time he had been placed on a Medrol DosPak. He was no longer of the Medrol DosPak and was currently taking Neurontin 600mg three times a day. His pain level was described as 5/10 but his worse pain was still a 7/10. He described pain in his lower back and right buttock that goes down to his knee. On examination strength was 5/5 throughout bilateral lower extremities. He had no atrophy. He had normal muscle tone in both lower extremities. He had tenderness to palpation of the right lumbosacral paraspinals. Deep tendon reflexes were 2+ for patellar and Achilles bilaterally. He had negative straight leg raise bilateral. Pinprick sensation was intact and symmetrical throughout bilateral lower extremities. Impression: 1. Right lumbosacral radicular pain with no significant change. 2. Lumbar pain following injury at work. Recommendations: 1. Continue Neurontin. 2. Continue Etodolac. 3. Continue work with restrictions. 4. Awaiting approval for consultation with spine surgeon.

On xxxx, MRI of the Lumbar Spine, Impression: 1. Mild anterior wedging of the T12 vertebra, likely chronic. 2. Minimal disc space narrowing at L4-5. 3. Broad-based disc bulge at L3-4 effaces the thecal sac and results in minor left neuroforaminal narrowing. 4. Broad-based disc bulge with annular fissure at L4-5 effaces the thecal sac. Combined with facet hypertrophy, there is minor bilateral neuroforaminal narrowing. 5. Facet hypertrophy at L5-S1 without significant disc herniation or narrowing.

On xxxxx, the claimant presented for follow up with complaints of pain in his back and pain in legs radiating down right leg. Plan: Selective nerve root block to block the right L4 nerve root to see if this is where the pain is coming from. Examination showed slight positive straight leg raise on the right side.

On xxxxx, Operative Note. Postoperative Diagnosis: Lumbar radiculopathy. Procedure: 1. Right transforaminal epidural steroid injection L4-5 under fluoroscopy. 2. Lumbar epidurogram.

On xxxxx, the claimant presented reporting not getting much relief from the L4 selective nerve root block. opined he was most likely having diskogenic pain with a referred pain into his leg. On exam he had 5/5 strength testing. Sensation was intact. Normal deep tendon reflexes. No long tract signs were seen. Pain and tenderness in the lumbar spine about the region of L4-5 and L5-S1. Plan: Evaluation with a CT diskogram from L2 to S1.

On xxxxx, UR. Rationale for Denial: xxxxxx CGT guidelines indicate that the use of discography is controversial. ODG-TWC states that discography is not recommended since studies have suggested that reproduction of the patient's specific back complaints on injection of one or more discs (concordance of symptoms) is of limited diagnostic value. If used anyway, guidelines state that in a situation where the selection of criteria and other surgical indications for fusion are conditionally met, discography can be

considered in preparation for the surgical procedure. However, all of the qualifying conditions must be met prior to proceeding to discography as discography should be viewed as a non-diagnostic but confirmatory study for selecting operative levels for the proposed surgical procedure. Discography should not be ordered for a patient who does not meet the surgical criteria. In this case, the claimant is an individual who is from the reported date of injury and reports persistent low back pain that radiates to the right lower extremity. Management has included medications, physical therapy, activity restrictions, chiropractic care, TENS unit, and several epidural injections In September and October of 2014, without resolution. The claimant reported a re-injury, and per report dated xxxx, an EMG study is consistent with chronic L5 radiculopathy. An MRI dated xxxx is equivocal for multilevel disc disease, multilevel degenerative findings, and no clear nerve root compromise. The claimant was recommended a L4 nerve root block in July which provided no relief. The provider is not convinced that this is the source of the pain. The provider believes that the claimant is most likely having diskogenic pain. The provider recommends a CT discogram from L2 to S1. However, there is limited indication that the claimant is currently a surgery candidate. The current level of pain with the use of medications is not specified and it is unclear whether the claimant received conservative measures to address the re-injury. Clinical findings, documentation submitted, and evidence-based guidelines do not support the medical necessity of this request.

ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS, AND CONCLUSIONS USED TO SUPPORT THE DECISION:

The request for the lumbar discogram is denied.

The Official Disability Guidelines (ODG) does not recommend discography as a diagnostic tool. Discography does not correlate with MRI findings of high intensity zone (HIZ). There may be a role for discography as a screening tool for preoperative surgical planning for a spine fusion.

This patient is current dealing with back and leg symptoms. He has completed several epidural injections. He has documented disc bulges at L3-4 and L4-5. There has been no discussion regarding spinal fusion in this patient. Based on the records reviewed, discography has limited value for the patient's care.

The lumbar discogram is not medically necessary for this patient.

PER ODG:

Discography	Not recommended. In the past, discography has been used as part of the pre-operative evaluation of patients for consideration of surgical intervention for lower back pain. However, the conclusions of recent, high quality studies on discography have significantly questioned the use of discography results as a preoperative indication for either IDET or spinal fusion. These studies have suggested that reproduction of the patient's specific back complaints on injection of one or more discs (concordance of symptoms) is of limited diagnostic value. (Pain production was found to be common in non-back pain patients, pain reproduction was found to be inaccurate in many patients with chronic back pain and abnormal psychosocial testing, and in this latter patient type, the test itself was sometimes found to produce significant symptoms in non-back pain controls more than a year after testing.) Also, the findings of discography have not been shown to consistently correlate well with the finding of a High Intensity Zone (HIZ) on MRI. Discography may be justified if the decision has already been made to do a spinal fusion, and a negative discogram could rule out the need for fusion on that disc (but a positive discogram in itself would not allow fusion). (Carragee-*Spine*, 2000) (Carragee2-*Spine*, 2000) (Carragee3-*Spine*, 2000) (Carragee4-*Spine*, 2000) (Bigos, 1999) (ACR, 2000) (Resnick, 2002) (Madan, 2002) (Carragee-*Spine*, 2004) (Carragee2, 2004) (Maghout-Juratli, 2006) (Pneumaticos, 2006) (Airaksinen, 2006) (Manchikanti, 2009) Discography may help distinguish asymptomatic discs among

morphologically abnormal discs in patients without psychosocial issues. Precise prospective categorization of discographic diagnoses may predict outcomes from treatment, surgical or otherwise. (Derby, 2005) (Derby2, 2005) (Derby, 1999) Positive discography was not highly predictive in identifying outcomes from spinal fusion. A recent study found only a 27% success from spinal fusion in patients with low back pain and a positive single-level low-pressure provocative discogram, versus a 72% success in patients having a well-accepted single-level lumbar pathology of unstable spondylolisthesis. (Carragee, 2006) The prevalence of positive discogram may be increased in subjects with chronic low back pain who have had prior surgery at the level tested for lumbar disc herniation. (Heggeness, 1997) Invasive diagnostics such as provocative discography have not been proven to be accurate for diagnosing various spinal conditions, and their ability to effectively guide therapeutic choices and improve ultimate patient outcomes is uncertain. (Chou, 2008) Although discography, especially combined with CT scanning, may be more accurate than other radiologic studies in detecting degenerative disc disease, its ability to improve surgical outcomes has yet to be proven. It is routinely used before IDET, yet only occasionally used before spinal fusion. (Cohen, 2005) Provocative discography is not recommended because its diagnostic accuracy remains uncertain, false-positives can occur in persons without low back pain, and its use has not been shown to improve clinical outcomes. (Chou2, 2009) This recent RCT concluded that, compared with discography, injection of a small amount of bupivacaine into the painful disc was a better tool for the diagnosis of discogenic LBP. (Ohtori, 2009) Discography may cause disc degeneration. Even modern discography techniques using small gauge needle and limited pressurization resulted in accelerated disc degeneration (35% in the discography group compared to 14% in the control group), disc herniation, loss of disc height and signal and the development of reactive endplate changes compared to match-controls. These finding are of concern for several reasons. Discography as a diagnostic test is controversial and in view of these findings the utility of this test should be reviewed. Furthermore, discography in current practice will often include injecting discs with a low probability of being symptomatic in an effort to validate other disc injections, a so-called control disc. Although this strategy has never been confirmed to increase test validity or utility, injecting normal discs even with small gauge needles appears to increase the rate of degeneration in these discs over time. The phenomenon of accelerated adjacent segment degeneration adjacent to fusion levels may be, in part, explained by previous disc puncture if discography was used in segments adjacent to the fusion. Similarly, intradiscal therapeutic strategies (injecting steroids, sclerosing agents, growth factors, etc.) have been proposed as a method to treat, arrest or prevent symptomatic disc disease. This study suggests that the injection procedure itself is not completely innocuous and a recalculation of these demonstrated risks versus hypothetical benefits should be considered. (Carragee, 2009) More in vitro evidence that discography may cause disc degeneration. (Gruber, 2012) Discography involves the injection of a water-soluble imaging material directly into the nucleus pulposus of the disc. Information is then recorded about the pressure in the disc at the initiation and completion of injection, about the amount of dye accepted, about the configuration and distribution of the dye in the disc, about the quality and intensity of the patient's pain experience and about the pressure at which that pain experience is produced. Both routine x-ray imaging during the injection and post-injection CT examination of the injected discs are usually performed as part of the study. There are two diagnostic objectives: (1) to evaluate radiographically the extent of disc damage on discogram and (2) to characterize the pain response (if any) on disc injection to see if it compares with the typical pain symptoms the patient has been experiencing. Criteria exist to grade the degree of disc degeneration from none (normal disc) to severe. A symptomatic degenerative disc is considered one that disperses injected contrast in an abnormal, degenerative pattern, extending to the outer margins of the annulus and at the same time reproduces the patient’s lower back complaints (concordance) at a low injection pressure. Discography is not a sensitive test for

	radiculopathy and has no role in its confirmation. It is, rather, a confirmatory test in the workup of axial back pain and its validity is intimately tied to its indications and performance. As stated, it is the end of a diagnostic workup in a patient who has failed all reasonable conservative care and remains highly symptomatic. Its validity is enhanced (and only achieves potential meaningfulness) in the context of an MRI showing both dark discs and bright, normal discs -- both of which need testing as an internal validity measure. And the discogram needs to be performed according to contemporary diagnostic criteria -- namely, a positive response should be low pressure, concordant at equal to or greater than a VAS of 7/10 and demonstrate degenerative changes (dark disc) on MRI and the discogram with negative findings of at least one normal disc on MRI and discogram. See also Functional anesthetic discography (FAD). **Discography is Not Recommended in ODG.** **Patient selection criteria for Discography if provider & payor agree to perform anyway:** o Back pain of at least 3 months duration o Failure of recommended conservative treatment including active physical therapy o An MRI demonstrating one or more degenerated discs as well as one or more normal appearing discs to allow for an internal control injection (injection of a normal disc to validate the procedure by a lack of a pain response to that injection) o Satisfactory results from detailed psychosocial assessment (discography in subjects with emotional and chronic pain problems has been linked to reports of significant back pain for prolonged periods after injection, and therefore should be avoided) o Intended as screening tool to assist surgical decision making, i.e., the surgeon feels that lumbar spine fusion is appropriate but is looking for this to determine if it is not indicated (although discography is not highly predictive) (Carragee, 2006) NOTE: In a situation where the selection criteria and other surgical indications for fusion are conditionally met, discography can be considered in preparation for the surgical procedure. However. all of the qualifying conditions must be met prior to proceeding to discography as discography should be viewed as a non-diagnostic but confirmatory study for selecting operative levels for the proposed surgical procedure. Discography should not be ordered for a patient who does not meet surgical criteria. o Briefed on potential risks and benefits from discography and surgery o Single level testing (with control) (Colorado, 2001) o Due to high rates of positive discogram after surgery for lumbar disc herniation, this should be potential reason for non-certification

A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:

- ☐ **ACOEM- AMERICAN COLLEGE OF OCCUPATIONAL & ENVIRONMENTAL MEDICINE UM KNOWLEDGEBASE**
- ☐ **AHCPR- AGENCY FOR HEALTHCARE RESEARCH & QUALITY GUIDELINES**
- ☐ **DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR GUIDELINES**
- ☐ **EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW BACK PAIN**
- ☐ **INTERQUAL CRITERIA**
- ☒ **MEDICAL JUDGEMENT, CLINICAL EXPERIENCE, AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS**
- ☐ **MERCY CENTER CONSENSUS CONFERENCE GUIDELINES**
- ☐ **MILLIMAN CARE GUIDELINES**
- ☒ **ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES**
- ☐ **PRESSLEY REED, THE MEDICAL DISABILITY ADVISOR**
- ☐ **TEXAS GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE & PRACTICE PARAMETERS**
- ☐ **TEXAS TACADA GUIDELINES**
- ☐ **TMF SCREENING CRITERIA MANUAL**
- ☐ **PEER REVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE (PROVIDE A DESCRIPTION)**
- ☐ **OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME FOCUSED GUIDELINES (PROVIDE A DESCRIPTION)**